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HIV Prevalence and Associated Factors among Students of Dire Dawa University, Eastern Ethiopia

By Birhan Mengistu (B.Sc)

Advisors

Professor Yemane Berhane

Dr. Belaineh Girma

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Abbreviations

AIDS	Acquired immunodeficiency syndrome
CI	Confidence interval
DHS	Demographic and health survey
FGAE	Family guidance association of Ethiopia
FGD	Focus group discussion
FMOH	Federal Ministry of Health
GCMS	Gondar college of Medical Science
HAPCO	HIV/AIDS prevention and control office
HIV	Human immunodeficiency virus
MPH	Master of public health
NGO	Non governmental organization
OR	Odds ratio
SRH	Sexual reproductive health
UNAIDS	United nation AIDS programs on HIV/AIDS
VCT	Voluntary counseling and testing
WHO	World health organization

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Abstract

Background: Epidemiological studies have shown that the peak incidence of HIV/AIDS occurs in young people aged 15-24 years. Sexual behaviors like early sexual debut, multiple sexual partners, inconsistent use of condom increase the risk of HIV/AIDS among youth. The students in University enjoy the freedom of living outside the guidance of their parents; if this is not managed properly it increases the likelihood to have of risky sexual behavior and HIV infection. It is imperative to monitor HIV among young people in universities for proper and timely action.

Objective: This research objective was to determine the prevalence of HIV infection among Dire Dawa university students and identify risk factors for HIV sero-positivity.

Method: A cross sectional study with internal comparison was conducted among students of Dire Dawa. A self administrated questionnaire was used to gather relevant information and blood test was conducted for HIV antibody. The two information were linked anonymously. Qualitative data was collected using Focus group discussion.

Result: The prevalence of HIV was 2.5% (95% CI 1.5, 3.5) (2.3% for female and 2.7% for male) with no significant difference between male and female. The students having sexual affair with same sex or both sexes were significantly 10.45 times (95% CI 1.93, 56.41) to be exposed to HIV than those having sexual affairs with only opposite sex. Having non-regular partner is significantly associated with HIV positivity among sexually active (OR=6.35 and 95% CI 2.2, 18.3). Drinking alcohol and chewing chat was a risk factor for commencing sexual intercourse among male with (OR=2.73 and 95% CI 1.72, 4.33) and (OR=2.02 and 95% CI 1.19, 3.42) respectively.

C**onclusion:** The students in the university are at risk of HIV infection, it is necessary to target them earlier in the high school and later when joining college by building their knowledge and skill to avoid risky sexual behavior.

Introduction

The first case AIDS was reported in 1981 in America. It was first recognized in homosexual men, but it was soon determined that the virus that causes AIDS can spread through sexual contact, blood and blood products, and from mother to infant during pregnancy, delivery and breast feeding. At the beginning of the AIDS pandemic, treatment was confined to palliative care and management of opportunistic infections. Today, HIV/AIDS is a global catastrophe. According to the Joint United Nations Program on HIV/AIDS (UNAIDS) and WHO report, approximately 33.2 million people worldwide are living with HIV/AIDS, and more than 2.5 million people were newly infected in 2007 — about 6,800 each day. Worldwide, more than 25 million people with HIV died since the pandemic began. In 2007, there were an estimated 2.1 million deaths worldwide due to HIV/AIDS. Sub-Saharan Africa remains the most seriously affected region, with AIDS remaining the leading cause of death. More than two thirds (68%) of all people HIV-positive live in this region where more than three quarters (76%) of all AIDS deaths in 2007 occurred. It is estimated that 1.7 million people were newly infected with HIV in 2007, bringing to 22.5 million the total number of people living with the virus (1). In Ethiopia, the 2008 from single point HIV prevalence estimated national adult HIV prevalence to be 2.2%. There are 1,037,267 people living with HIV/AIDS and 125,147 new infections and 58,290 deaths due to AIDS. The highest prevalence of HIV being in the age group 15-24 which is 5.6% (2).

Sexual behaviors like early sexual debut, multiple sexual partners, inconsistent use of condom increase the risk of HIV/AIDS among youth. According to HIV/AIDS behavioral surveillance survey in 2006, 14.6% of males and 5.3% of female have had sexual experience. The median age of sexual debut (first sex) among those who were sexually active was 16 years for both sexes.

Among those who had had sex during the previous 12 months, 22.7% reported having had sex with more than one partner. Consistent use of condoms with a non-commercial sexual partner during the preceding 12 months was reported only by 41.8% in-school youth (3).

A study conducted among Gondar College of medical science student showed Out of 383 students 214 (56.1%) were sexually active. Among the sexually active students, 37.1% reported ever use of condom. Consistent condom use was reported only by 6.4%. Sexual contact with commercial sex workers was reported by 7.8% of them (4).

The prevalence of HIV/AIDS in the age between 15 and 24 is the highest according to 2006 AIDS report in Ethiopia which is 5.6% (5). Of the 677 study subjects, 20 (3.0%) tested positive for HIV-1 antibodies. Of the 319 youth in school, 1 (0.3%) was positive (6). According to the study conducted among students of Jimma University HIV prevalence of 12.2 was found (7).

Generally, heterosexual intercourse is the primary mode of HIV/AIDS transmission. In our country it accounts for more than 75 percent of all cases. Heterosexual relations are usually undertaken by the sexually active members of the population. In this case, young adults or youths are more involved in heterosexual relations than other members of the population. Hence, this group becomes the ideal target of any HIV/AIDS prevention programme. And one setting where this target group of young people can be located is at the tertiary institutions of learning, especially the universities. The study conducted among Jimma University focused on post basic students (who joined university after work experience) and sample was taken from students who visited the clinic. Students in universities play a significant role in building society with strong social and economic condition in the future. The students in University enjoy the freedom of living outside the guidance of their parents; if this is not managed properly it increases the probability of risky sexual behavior and HIV infection. Dire Dawa University is recently

established institute with less experience on HIV/AIDS prevention among students. There fore it is necessary to conducted HIV prevalence and associated factors study in the universities to know the clear picture and produce appropriate interventions.

Literature review

According to the study conducted among Jimma University students, out of 500 sample students there were 60 positives cases making the prevalence of HIV seropositivity 12.2%. The prevalence of HIV seropositivity was higher among married students 4(33.3%) followed by those who have a boy/girl friend 11(12.1%). The prevalence was lower among those who had no sexual partner at all (11.6%). Analysis of the association of seropositivity with the life styles of the study participants showed that the prevalence was higher in smoker, chat chewer and alcohol drinkers as compared to the counter parts not having these habits, but the difference is not statistically significant ($p>0.05$). Concerning the trend of seropositivity by the year of training, the highest prevalence 15(19.5%) was found in year III students followed by year V and II that had sero-prevalence rate of 1(14.3%) and 25(12.3%) (3).

According to AIDS in Ethiopia 2006, of the total 28,247 collected specimens, 16,252 were from rural sites and 11,995 were from urban sites. The overall unadjusted HIV prevalence among these samples was 5.3% (9.5% at urban sites and 2.2% at rural sites). ANC clients in the age group 15-24 years had the highest prevalence of 5.6% of all age groups (5).

In the study conducted among high school youth in Addis Abba, of the 677 study subjects, 20 (3.0%) tested positive for HIV-1 antibodies. Of the 319 youth in school, 1 (0.3%) was positive, while of the 358 youth out-of-school, 19 (5.3%) were positive (6).

The HIV/AIDS behavioral surveillance survey Ethiopia 2006 showed 9.9% of in-school youth have had sexual experience. Disaggregated by sex, 16.6% of males had had sex compared to

5.3% of females. In addition this survey showed, among those who had had sex during the previous 12 months, 22.7%(31.2% of males and 2.7% of females) reported having had sex with more than one partner. Males were 12 times more likely to have had more than one sexual partner than females (95%CI 5.6, 24.7) (7).

In BSS 2005, among in-school youth that had ever had sex, 43.1 %(45.2% of males and 37.3%) had used a condom. Among those who have had sex with commercial partners during the previous 12 months, 82.1% had used condom at their last sexual encounter. Among those who had had sex with non-commercial sexual partners during the previous 12 months, 52.7 %(57.2% of males and 41.1% of females; $p<0.001$) had used a condom during their last sexual encounter. Of those who had sex within the 12 months preceding the survey, 112 (40 females and 72 males) also had sex in exchange for money (males with commercial sex workers). Of these 112 participants, 41 (37%) used a condom every time, 26 (23%) had never used a condom, and the remaining 35 (31%) used a condom sometimes (7).

Adolescence is a time when many young people experience critical and life-defining challenges such as their first sexual experience, marriage, pregnancy, and parenthood. Adolescent sexual behavior is important not only because of the possible reproductive outcomes, but because risky sexual behavior is associated with sexually transmitted infections such as HIV/AIDS (8).

Early initiation of sex poses health risks for both young women and men. Most young adults who enter into a sexual relationship for the first time do not use any form of contraception, leaving them vulnerable to unintended pregnancies, unplanned parenthood and high risk abortion. Unprotected sex also exposes the young to sexually transmitted infections including HIV/AIDS. Young women are especially vulnerable because of their biological susceptibility—i.e., the immaturity of their reproductive organs (9).

A study among South Africa youth showed, 67% of young people aged 15-24 years reported having had sexual intercourse. Among 15-19 year olds, 48% reported being sexually experienced compared to 89% of 20-24 year olds. There were no differences between genders. Among those who reported being sexually experienced, 17% indicated that they had not had sex in the past 12 months. Sexually experienced women were more likely than men to report having had sex in the past 12 months, particularly among 15-19 year olds. The median age of first sex among those who reported being sexually experienced was 17 years. Eight percent of sexually experienced youth reported having sex at age 14 or younger. Sexually experienced men were significantly more likely to report sex at 14 years or younger compared to sexually experienced women (12% vs 5%) (10).

The same study among South Africa youth, of those sexually experienced young people, 35% indicated that they have had one lifetime sexual partner. Sexually experienced men were significantly less likely than women to report one lifetime sexual partner (24% vs 45%) and the number of lifetime sexual partners increased with age among males and females. Among those who reported having had sexual intercourse in the past 12 months, 27% indicated that they had had more than one sexual partner in this time. Sexually experienced males were significantly more likely than females to report more than one sexual partner in the past 12 months (10).

According to national survey of HIV and sexual behavior among South African young, of the sexually experienced youth, 52% reported using a condom at last sex. Condom use was almost identical among sexually experienced men and women aged 15-19 years but, among sexually experienced 20-24 year olds, females were significantly less likely to report condom use at last sex than men (44% vs 57%). One-third (33%) of youth who reported having sex in the past 12 months reported always using condoms with their most recent partner and 31% indicated that

they never used condoms with their most recent partner. Overall, among youth who reported having sex in the past 12 months, females were significantly less likely than males to report always using a condom with their most recent partner (28% vs 39% respectively) (10).

The survey among South Africa youth found that among 15-24 year old South Africans the HIV prevalence was 10.2% [95% CI 9.3-11.3]. Prevalence was significantly higher among women (15.5%) than among men (4.8%) as well as in the 20-24 year old age group (16.5%) compared to the 15-19 year old age group (4.8%).Young women are disproportionately affected by HIV. Among the 10% of South African youth who are HIV positive, 77% are women. Nearly 1 in 4 women aged 20-24 are HIV positive compared to 1 in 14 men of the same age (10).

A study conducted among out of school youth in Bahir Dar showed of the 628 respondents, 403 (64.2%) had already experienced sexual intercourse at least once. The mean age at first sexual commencement was 17.7 (+2) years. Of the 277 unmarried males, 166 (59.9%) and of the 204 unmarried females, 97 (47.5%) had ever had sexual intercourse. Of the 486 unmarried out-of-school youths, 241 (49.6%) had sexual intercourse at least once in the 12 months preceding the survey. Furthermore, 130 (40.6%) of the 320 males and 74 (24.7%) of the 300 females (who responded to this specific questionnaire item) had intercourse with non-regular partners, suggesting that males tended to be about two times more likely to have sex with non-regular sexual partners than females (odds ratio [OR]=1.78, 95% confidence interval [CI] 1.16-2.73). In addition, a statistically significant association was also observed between education level of youths and their sexual behavior. Out-of-school youths educated below 6th grade were more than two times at risk of having sex with a non-regular partner and for exchange of money than youths who were educated above 9th grade (OR=2.35, 95% CI 1.29-4.29) (11).

According to the above study among out-of-school youth in Bahir dar, two hundred sixty-four (42%) of the 624 study participants reported that they never drank any kind of alcoholic drinks, 113 (18%) drank alcohol about once a week, 85 (14%) drank twice a week, and the remaining 75 (12%) drank alcohol daily. Males were twice as likely to drink alcohol at least once a week than females (OR=1.98, 95% CI 1.423-2.756). Furthermore, a statistically significant association was observed between intake of alcohol and sexual behavior of youths. During the assessment of the prevalence of khat-chewing (Catha edulis) a green leaf that is habitually chewed among people in Ethiopia, Kenya, Somalia, and Yemen. The active ingredient in khat that has a stimulant effect is nor-pseudoephedrine], 239 (38%) of the out-of-school youths chewed khat at least once within the 12 months preceding the survey. One hundred fifty-one (63.2%) of these were males, and 88 (36.8%) were females (OR=2.15, 95% CI 1.54-2.99). In addition, 39.5% of those out-of-school youths who chewed khat also reported that it increased their sexual desire. Adjusting for possible confounding sociodemographic variables, it was found that those who chewed khat were about six times more likely to have had sex either with non-regular partners, including commercial sex workers than those who did not report chewing khat.

Communicating with a partner concerning reproductive risks was associated with a higher likelihood of condom use at last sex. Of the 356 study participants reporting sexual partners, 263 (73.9%) had only one, 43 (12.1%) had two, and the remaining 50 (14%) had more than two sexual partners. About 59% of those who reported having a regular sexual partner claimed to openly discuss sexuality issues with their partners. Those who did not report to openly discuss sexuality issues with their partners were also more than four times likely to have multiple sexual partners than those who claimed to openly discuss sexuality issues with their partners (OR=4.7, 95% CI 2.82-7.80) (11).

From the total study population, 90(25%) of them had history of sexual intercourse prior to the study period in the study conducted among Agaro high school students. Among males, 70(32.6%) of them had sexual intercourse in the past 12 months. The average age of the first coitus was 16.74 years. The average age of debut for males was 16.45 and for females it was 16.8 years. Majority 50(55.6%) of those with previous sexual exposure had one partner and 32(35.6%) had 2-5 partners and the remaining 8 students had more than 5 partners. Twenty eight males (40%) and five females (7.1%) reported to have 2-5 and more than 5 partners respectively (12).

The overall the prevalence of sexual intercourse was 33.2% (44.0% males and 24.8% females). Variables positively associated with the outcome in multivariate analysis were male gender (OR=2.39; 95% CI (1.81, 3.17)), cigarette smoking (OR=1.67; 95% CI (1.07, 2.63)), alcohol drinking (OR=1.63; 95% CI (1.18, 2.26)), and drug use (OR=9.82; 95% CI (6.28, 15.36) according to the study among Namibian youth.(13)

According to Ethiopia demography and health survey 2005, information on higher-risk sex (sexual intercourse with a partner who is neither a spouse nor a cohabiting partner) shows that less than 1 percent of women and 4 percent of men have had two or more partners during the 12 months preceding the survey, and 3 percent of women and 9 percent of men have had higher-risk sexual intercourse. Among respondents who engaged in higher-risk sexual intercourse, 24 percent of women and 52 percent of men reported condom use the last time they had sexual intercourse (14).

In the study conducted among University students in Edinburgh, Scotland, the factors associated with HIV positivity were residence in Africa, intravenous drug use and male homosexuality. Overall, 74% of respondents reported ever having had sexual intercourse and this rate was the same for men and women (15).

According to the study reproductive health risk and protective factors among youth in Lusaka, Zambia, attaining higher levels of education and being currently enrolled in school were associated with a lower likelihood of ever having had sex among females and, for both genders, of having had multiple recent sexual partners, as well as a higher likelihood of consistent condom use. Being affiliated with the Protestant or Catholic religions was associated with a lower likelihood of having multiple partners during the past three months, but it was also associated with a lower likelihood of consistent condom use. Regular church attendance was not associated with any of the behaviors considered.

Having knowledge of HIV/AIDS was protective against ever having had sex for both genders. Among males, it was also protective in reducing the number of partners over a lifetime, reducing the likelihood of having had more then one partner in the last three months, and of increasing the likelihood of using a condom at last sex. Being worried about getting AIDS was associated with a higher probability of using a condom at last sex, and also with consistent, recent use of condoms, but only for males.

Having ever used alcohol and drugs was a risk factor for ever having had sex, having more sexual partners over lifetime, and having more than one partner during the last three months. Unexpectedly, smoking cigarettes was associated with consistent, recent use of condoms. Having sexually experienced friends was associated with a higher probability of ever having had sex and having more lifetime sexual partners. Youth who engaged in higher-risk activities (attending

parties, going to discos, drinking alcohol) with their first close friend were more likely to ever have had sex, were more likely to have a higher number of sexual partners over their lifetime, and were less likely to have used a condom at last sex (boys only). However, engaging in lower-risk behaviors (e.g., watching television or videos) with friends also was associated with a lower likelihood of condom use at last sex. Communicating with close friends regarding reproductive health issues was associated with a higher probability of ever having had sex, but it was also associated with a lower number of partners over a lifetime and a higher likelihood of condom use. Among females, it also was associated with a higher probability of having had multiple partners during the last three months (16).

A study among university students in Nigeria indicated that 54% of the students had steady boy/girl friends, 63% had had sexual intercourse, 43% had sexual intercourse with their lovers while 20% had sexual intercourse with «just somebody» (17).

In the study conducted among high school students in Gondar, The seroprevalence of HIV infection was 1.1%. Sexual contact with commercial sex worker or non-regular partner was reported by 16.7% of the students in Gondar high school (18).

A study among students of free town students showed there is a stronger relationship between homosexuality and HIV/AIDS; their opinion that HIV/AIDS is more strongly associated with African students. Data obtained from this survey questionnaire show that even if students have a great deal of knowledge to their disposal, and even if they recognized that they were personally at risk, some students' sexual practices and risk-taking behavior remained unchanged (19).

Objective

General objective

The general objective of this research was to assess HIV prevalence and factors associated with sero-positivity among students of Dire Dawa University.

Specific objective

1. To determine the prevalence of HIV among the students
2. To identify factors associated with HIV sero-positivity among the students

Methods

Study area

The Dire Dawa Provisional Administration is found in the eastern part of Ethiopia 515 kilometers away from Addis Ababa. It is bordered by Somali Regional State in the east, west and north, and the Oromia Regional State in the south and east.

The Administration has a total area of about 1332.62 square kilometers with a total projected population of 383,529 as of July 2005. Of the total population of the Administration, 74% live in urban areas and the remaining 26% in rural areas. The average population density of Dire Dawa is about 316.13 persons per sq. km.

Health care is one of the crucial components of basic social services that have a direct linkage to the growth and development of a country as well as welfare of the society. Poor health conditions largely undercut economic development. Ethiopia is one of the poorest developing countries of the world about 47% of its population lives below the line of absolute poverty that contributed to the poor health situation in the country. Dire Dawa is one of the few major urban centers in the country, who has experienced rapid urbanization growth. From the total population of 383,529 in 2005, 74 % of the population resides in urban area where the annual growth rate of

4.31 %, which higher than the total population (3.8%).It is also expected that the total population will reach 457,694 by the year 2010.The average household size of the region is 4.7 and nearly half of the population is female (49.91 %) with Total Fertility rate of 3.6 The administration is facing high unemployment rate of 33.5 % and about 33.3 % of the population lives below poverty line which exacerbates critical gaps in basic health services. The health system of the administration has been organized to play the pivotal roles of managing and coordinating the operation of the primary health care services, which currently consists of 1 referral hospital, 6 health centers (2 in rural) and 34 health posts (5 in urban) owned by government. There are also 2 hospital and 21 private owned clinics. Health services utilization rate of the administration is 0.39 per capita, potential health service coverage is 83.4 % (20). The adult HIV/AIDS prevalence is 4.3 in 2007(single point estimate). Dire Dawa University is recently opened and found on the western part of the town. It has 5 faculties and 22 departments and a total of 4975 students.

Study design

A cross-sectional study with internal comparison was conducted among Dire Dawa University students to determine the HIV prevalence and factors associated with sero-positivity. The study was conducted from February to June 2009.

Study population

The study populations in this research were the 4975 regular students in Dire Dawa University which include all faculties and departments from first year through third year.

Sample size and sampling

The determination of sample size for the study was done using EpiInfo version 3.3.2 software (EPi-Info, 2005). The research findings of Tefera et al (2002) on the prevalence rate of HIV among Jimma university students i.e. 12.2% was taken as an input. As well, the study has used 95% level of confidence, 80% power and 2% margin of error. Therefore, based on the above data the total sample size was calculated as 934 including 10% non response rate.

Sampling technique

There were a total of 4794 students from first year to third year in Dire Dawa Universities. The list of departments, number of students by sex in each department and class schedule were taken from each faculty. At the end of each class sessions students were informed about the study and requested for their voluntary participation. After this a serial number starting from one was given for each male and female student independently. Then samples were selected at one step using systematic random sampling method proportional to the size of each and every department and proportional to size allocation technique was employed to obtain reasonable number of both sexes.

Measurement/variables

The main variable was HIV status

Independent variables

Demographic factors (age, sex, marital status, religion, average monthly expenditure)

Knowledge of HIV/AIDS transmission and prevention

Perceived susceptibility

Peer sexual behavior (peer sexually active, peer have multiple sexual partner, peer discourage condom use)

Communication/discussion with peers and sexual partner on HIV/AIDS

Non-sexual behavior (alcohol drinking, khat chewing, Smoking, and drug abuse)

Type and Number of sexual partners, Condom use

Café use, residency in dormitory, participation in anti-AIDS club

Data collection technique

Questionnaire

A self administered questionnaire was adopted from behavioral surveillance survey in Ethiopia 2006. It included socio-demographic characteristics, sexual behavior and other non-sexual characteristics including knowledge on HIV/AIDS, communication and peer factor, institutional factors, and substance use. The questionnaire was translated in to Amharic language for consistency of data collection. It was tested on 20 students from private college which was not included in the research. Then questionnaires were edited before the actual data collection. The principal investigator has given orientation for 5 nurses, one community counselor and two laboratory technician on the approaches of data collection.

The samples selected from each department by systematic random sampling were informed about the name and qualification of the principal investigator, the institute the researcher belongs, the research objective, requirement from students (filling properly the questionnaire and voluntary give blood for testing) and benefit of the research to the students. They were asked for their consent to participate in the research as soon as they agreed questionnaires were distributed to each student and it was filled in class rooms.

Focus Group Discussion

In order to gain further information on HIV/AIDS and issues surrounding risky sexual behavior, Focus Group Discussions were conducted. There were four focus group discussions conducted among 1st year male and female and senior male and female students totally each composed of eight discussants. A semi-structured question were prepared and used to facilitate the focus group discussion and note was taken by the principal investigator. The focus group discussion participates voluntarily chosen from students of both sexes.

HIV testing

After filling the questionnaire each student directed to the special set up where blood is drawn by the health professionals. The health professionals asked each student for consent to give blood and up on voluntary agreement test for HIV antibody was conducted through KHB. The test kit were given code that match with the questionnaire in order to link the result with the information on the questionnaire. The test was conducted in accordance with national HIV/AIDS prevention and control office testing strategies and algorithms(21) and result were interpreted as the manufacturer order (21). The presence of HIV antibodies was demonstrated by rapid tests on blood sample 40µl taken from finger tip. The students have been given leaflets on HIV/AIDS, a list of fixed sites providing voluntary counseling and testing (VCT) services near the campus, and a voucher to access free VCT services from Dire Dawa Family guidance association clinic.

Testing procedure

- Test cassettes were removed from a foil and place on flat surface
- Blood sample was taken from finger through clean and safe procedure
- 40µl of blood sample was taken through precision pipette and droped to the sample area first and then sample diluents was instilled(1 drop 40 µl) to the same area

- The result were waited for 30 minutes before interpretation

In summary, the three possible outcomes for a single HIV antibody test were:

- Reactive or Positive-when both test band and control band are present
- Non-reactive or Negative when only the control band is present
- Invalid-when no control band is present

The results for sensitivity, specificity, negative predictive value, and positive predictive value of KHB and Stat Pak ranges from 98.9% to 99.7%, 99.4% and 99.5% respectively(22). This means the test performance of the HIV rapid test was nearly as good as the results of the "gold standard" or true value and the test yielded highly accurate results.

Data Quality

A pre-tested questionnaire prepared in Amharic language was used to allow consistent understanding and response. The data collectors were trained before data collection and data was checked each night. The completeness information on each questionnaire was checked daily after data collection and it was also checked before data entry. The students were requested to give true answer about their characteristics before distributing the questionnaire and they were reassured the information will be confidential and will only be used for the research purpose. Each answer on the questionnaire was checked for consistency with rest of the questions.

Data analysis and presentation

The questionnaire has been cross checked before entry and then data was entered in to computer and cleaning was done to maintain accuracy and internal consistency before any test. The data analysis was done using SPSS version 15. The result is presented using frequencies, proportion and summary statistics. The response from focus group discussion were transcribed and presented as it is in the result part to supplement the quantitative findings.

Operational definition

Non-regular partner: sexual partner for fee or sexual partner for non-fee but casual

HIV transmission knowledge: those who know at least three of the major transmission ways (unsafe sex, unsafe blood contact, mother to child transmission) and had no misconceptions about HIV transmission

HIV prevention knowledge: those who know at least three of the major prevention ways (abstinence, faithful to one's partner, condom use during each sex)

Addictive drug: use of any of the following addictive drug (Gaya/sisha, Benzene, Hashish, Cocaine, Mariawana)

Residence out side campus: those who have rented house outside the campus or live in friend's house outside the campus

Café user: those who eat their regularly meals at the University café

Ethical consideration

Ethical clearance was received from Gondar university ethical committee. Participants were informed about the study and were informed about their right to participate in the survey. Official letter was written to the university. Written consent was also secured. HIV testing was anonymous that the student was not required to write name or any other identification but result was linked with questionnaire based on the code given on the spot.

Result

Quantitative part

A total of 934 students were invited to participate in the study; of which 915 responded fully to the questionnaire and participate in the HIV test. The response rate was 97.9%, 5 students decline the test and 14 questionnaires were found incomplete. The prevalence of HIV was 2.5% (95% CI 1.5, 3.5) (2.3% for female and 2.7% for male) with no significant difference between male and female. The prevalence for 25-29 years, 20-24years and 15-19 years was 1(4.5%), 19(2.7%), and 3(1.6%) respectively. Most of the study participants 307(33.6%) and 295(32.2%) came from regional and Wereda towns respectively. The mean age of the participants was 20.62±1.5. Majority, 524(57.3%) were male participants. The predominant religions of the study participants were Orthodox and protestant Christian and Muslim, 619(67.7%), 150(16.2%) and 121(13.2%) respectively. Majority, 588(64.3%) were social science students and 588(42.2%), 367(40.1%) and 112(17.7%) were from 1^{st}, 2^{nd} and 3^{rd} year students. The trend of seropositivity decrease as the year of training increase that it 10(2.6%), 9(2.5%) and 4(2.5%) for 1^{st}, 2^{nd} and 3^{rd} year students. The majority of the participants were Amhara 389(42.5%) followed by Oromo 247(27%). Most of the participants monthly expenditure was less than 100birr, 410(44.8%) followed by 100 to 200birr, 395(43.2%) (Table 1).

Table 1 Prevalence of HIV by socio demographic characteristics of the student in Dire Dawa University, 2009

Variables	Frequency	Percent	HIV positive (%)
Age			
15-19	184	20.1	2(1.6)
20-24	709	77.5	19(2.7)
25-29	22	2.4	1(4.3)
Region			
Tigray	87	9.5	2(2.3)
Amhara	260	28.4	4(1.5)
Oromia	230	25.1	7(3)
SNNRP	107	11.7	3(2.8)
Dire Dawa	49	5.4	0(0)
Addis Abeba	151	16.5	6(4)
Other	31	3.3	1(3.2)
Sex			
Male	524	57.3	14(2.7)
Female	391	42.7	9(2.3)
Field of study			
Natural science	327	35.7	14(4.3)
Social science	588	64.3	9(1.5)
Ethnic group			
Oromo	247	27	9(3.6)
Amhara	389	42.7	8(2.1)
Tigre	119	13	3(2.5)
Gurage	61	6.7	1(1.6)
Other	99	10.7	2(2)
Religion			
Orthodox	619	67.7	16(2.6)
Muslim	121	13.2	2(1.7)
Protestant	150	16.4	4(2.7)
Catholic	10	1.1	0(0)
Other	15	1.6	1(6.7)
Monthly expenditure			
Less than 100 birr	410	44.8	5(1.2)
100-300 birr	395	43.2	15(3.8)
301-500birr	82	9.0	2(2.4)
Greater than 500 birr	28	3.1	1(3.6)

Of the 915 participants, 356(38.9%) (48.9% of male and 25.6% of female) had history of sexual intercourse before marriage prior to the study. The mean age at first sexual commencement was 18.3 ±1.7years. Among 15-19 year olds, (35)19% reported being sexually experienced compared to (306)43.2% of 20-24 and 15(68.2%) of 25-29 year olds. Majority, 313(87.9) of sexually active participants started sexual intercourse before entering to the university. Among sexually active respondent 27(7.5%) (11% and 6.3% sexually active female and male) had sexual affairs with similar sex (table 2).

Table 2 Prevalence of HIV by sexual behavior among Dire Dawa university students, 2009

Variables	Frequency	Percent	HIV positive (%)
HIV status			
Positive	23	2.5	
Negative	892	97.5	
Ever had sexual encounter			
Yes	356	38.9	23(6.5)
No	559	61.1	0(0)
Age at first sex			
10-14	11	3.1	0(0)
15-19	261	73.3	21(8)
20-24	84	23.6	2(2.4)
Period sexual intercourse started			
Before university	314	87.9	21(6.7)
After university	43	12.1	2(4.7)
Sexual affairs			
Opposite sex	329	92.4	19(5.8)
Same sex	27	7.6	4(14.8)
Type of sexual partner			
Regular partner	217	61	8(3.7)
Non-regular partner	132	37	15(10.8)
Other	7	2	0(0)
Number of life time sexual partner			
One	240	67.4	8(3.3)
Two	69	19.4	10(14.5)
Three	23	6.5	2(8.7)
Four and above	24	6.7	3(12.5)
Mode of sexual intercourse			
Vaginal	286	80.3	17(5.9)
Anal and oral	9	2.5	0(0)
Vaginal and anal	15	4.2	3(20)
Vaginal and oral	34	9.6	2(5.9)
Vaginal, oral and anal	12	3.4	1(4.3)
Used condom at last sex			
Yes	176	49.4	9(5.1)
No	180	50.6	14(7.8)
Frequency of condom use			
Always	89	25	5(5.6)
Sometimes	131	36.8	9(6.8)
Never	136	38.2	9(6.6)

Among those who reported having sexual intercourse, 116(32.6%)(35.9% of male and 24% female) indicated that they had had more than one sexual partner. Male are more likely to have more than one partner than female (odds ratio=1.77 95%CI 1.05, 3.0).

Among sexually experienced participants, 49.4% reported using a condom at last sex (table 2). One-fourth (25%) of the participant who reported having sex in the past reported always using condoms with sexual partner and 38.2% indicated that they never used condoms with their sexual partner. Among participants who engaged in sexual intercourse with non regular partner, 49.6 percent of male and 20.8 percent of female reported condom use. Most participants responded that the mode of sexual intercourse they practiced 286(80.3%), 34(9.6%), 15(4.2), 12(3.4) and 9(2.5) vaginal, vaginal and oral, vaginal and anal, vaginal, oral and anal, and anal and oral respectively. With regards to sexually transmitted disease 41(4.5%) had a history of either genital ulcer or genital discharge.

From the sampled participants, 403(44.1%), drank alcohol in their life time, 45(11.1%) drank twice or more per week, 139(34.5) drank once a week and 219(54.4) drank rarely on special occasion. With regard to chat chewing, 195(21.5%) chewed chat in their life, 46(23.5%) chewed twice or more per week, 64(32.8%) chewed weekly and 86(43.7%) chewed on special events. The prevalence of smoking and use of addictive substance (like sisha or benzene or cocaine) was found 64(7%) and 52(6%) respectively (table 3). Watching pornographic film was practiced in 328(36%), 45(13.7%) watched twice or more per week (some have downloaded the film on their mobile), 64(30.7%) watched weekly and 182(55.6) watched rarely.

Table 3 Substance use and pornography film watching habit of the student in Dire Dawa university, 2009

Variables	Frequency	Percent	HIV positive (%)
Drunk alcohol			
Yes	403	44	12(3)
No	512	56	11(2.1)
Chewed chat			
Yes	196	21.4	7(3.6)
No	719	78.6	16(2.2)
Smoked			
Yes	64	7	4(6.3)
No	851	93	19(2.2)
Used addictive drug			
Yes	52	5.7	1(1.9)
No	863	94.3	22(2.5)
Watched pornographic film			
Yes	328	35.8	10(3)
No	587	64.2	13(2.2)

Majority of the student 664(72.6) and 669(73.1) know at least three major ways of HIV transmission (unsafe sex, unsafe blood contact and mother to child transmission) and prevention (abstinence, faithful to one's partner and consistent condom use) respectively. Most of the student, 794(86.8%) believe that their chance of getting HIV is none or low. From all the sampled students, 399(43.6%) have ever been tested for HIV. More males (44.1%) than females (43%) tested but not significantly different.

Table 4 HIV Related Knowledge, communication and peer characteristics of the student in Dire Dawa University, 2009

Variables	Frequency	Percent	HIV positive (%)
HIV transmission			
Know at least 3 major ways	664	72.6	19(2.9)
Know less than 3 ways	251	27.4	4(1.6)
HIV prevention			
Know at least 3 major ways	669	73.1	13(1.9)
Know less than 3 ways	246	26.9	10(6.7)
Have sexually active peer			
Yes	480	52.5	12(2.5)
No	435	47.5	11(2.5)
Have Peer who discourage condom use			
Yes	203	22.2	7(3.4)
No	712	77.8	16(2.2)
Influenced by Peer for sex			
Yes	275	30.1	5(1.8)
No	640	69.9	18(2.8)
Discuss on HIV/AIDS with peer			
Yes	662	72.3	18(2.7)
No	253	27.7	5(2)
Perceived susceptibility			
Low	794	86.8	19(2.4)
High	121	13.2	4(3.3)
Participation in anti-AIDS club			
Yes	254	27.8	8(3.1)
No	661	72.2	15(2.3)
Current residence			
In the campus	857	93.7	20(2.3)
Out of the campus	58	6.3	3(5.2)
Café use			
Yes	881	96.3	23(2.6)
No	34	3.7	0(0)

Majority of the students, 662(72.3%) discuss freely with close friends on HIV/AIDS issues, 480(52.7%) do have sexually experienced peer, 203(22.2%) do have peer who discourage condom use and 275(30.1) have been influenced by peer for sex. Most of the student, 857(93.7%) usually reside in the campus dormitory and 58(6.3) use rented house out of the campus, 254(27.8) had history of participation in anti-AIDS club (table 4).

Positive HIV status was significantly associated with the field of study. Being in natural science was 4.19 times (95%CI 1.53, 11.47) more likely to have HIV than social science students among sexually active (table 5). Having knowledge of HIV/AIDS prevention was protective against HIV positivity among sexually active (OR=0.04 95% CI 0.006, 0.41). The students having sexual affair with same sex had 10.45 times (95% CI 1.93, 56.41) likelihood to be infected by HIV than those having heterosexual orientation. Out of the 356 sexually active participant 139(39%) (44.9% of male and 24% of female) had sexual intercourse with non regular partner. It is also seen that males tended to be about 3 times more likely to have sex with non-regular sexual partners than females (odds ratio OR=2.58, 95% confidence interval CI 1.5-4.3). Having non-regular partner is significantly associated with HIV positivity (OR=6.35 and 95% CI 2.2, 18.3) (table 5).

Table 5 Predictors of HIV status among sexually active students of Dire Dawa University, 2009

Variables		HIV positive		OR, 95% CI (crude)	OR, 95% CI (Adjusted)
		Yes	No		
Age of the student	15-19	3	32	1	1
	20-24	19	287	0.7(0.19,2.51)	1.22(0.26,5.63)
	25-29	1	14	0.82(0.07,7.97)	1.51(0.1,21.7)
Sex of the student	M	14	242	1	1
	F	9	91	1.71(0.71,4.08)	2.61(0.85,8.06)
Field of study	Social science	9	215	1	1
	Natural science	14	118	2.83(1.19,4.08)	4.19(1.53,11.47)
Student sexual relationship	Opposite sex	19	310	1	1
	Similar sex	4	23	2.83(0.89,9.03)	10.45(1.93,56.41)
Type of sexual partner	Regular	8	209	1	1
	Non-regular	15	124	3.16(1.3,7.66)	6.35(2.2,18.3)
Condom use during sex	Always	5	84	1	1
	Sometimes	9	122	1.23(0.4,3.82)	1.69(0.46,6.26)
	Never	9	127	1.19(0.38,3.6)	1.47(0.39,5.52)
Drink alcohol	Yes	12	212	0.62(0.26,1.45)	0.72(0.27,1.94)
	No	11	121	1	1
Peer discourage condom use	Yes	7	114	0.84(0.33,2.1)	0.59(0.2,1.74)
	No	16	219	1	1
Knowledge of HIV prevention method	Know at least three major	2	104	0.21(04,0.91)	0.04(0.006,0.41)
	Know less than three major	21	229	1	1
Discuss on HIV with peer	Yes	18	222	1	1
	No	5	111	0.55(0.2,1.53)	0.58(0.17,2.01)
Risk perception	Low	19	240	1	1
	High	4	93	0.54(0.18,1.63)	0.45(0.11,1.49)
Participation in AACs	Yes	8	88	1	1
	No	15	245	0.67(0.27,1.64)	0.67(0.24,1.83)
Live in the campus dormitory	Yes	20	297	1	1
	No	3	36	1.23(0.35,4.37)	2.23(0.46,10.82)

As age increase the likely of starting sexual intercourse increase that is for age 20-24 years 9.5 (95% CI 3.2, 27.8) and 15-19 years 2.88 times (95% CI 1.83, 4.53) higher than 10-14 years. There is significant association being natural science and ever started sexual intercourse (OR=1.41 95% CI 1.02, 1.94) (table 6). Having ever used alcohol was a risk factor for ever having had sexual intercourse among male (OR=2.73 and 95% CI 1.72, 4.33). Chewing chat was found to increases significantly the likely of ever starting sexual intercourse among male (OR=2.02 and 95% CI 1.19, 3.42). It was found statistical significant association (OR=2.16 and 95% CI 1.51, 2.96) between ever watched pornographic film and ever starting sexual intercourse. Being influenced by peer has protective effect for ever starting sexual intercourse (OR=0.67 95% CI 0.47, 0.97) but discussion with peer on HIV/AIDS issue increases the probability of ever starting sexual intercourse (OR=1.51 95% CI 1.04, 2.2) (table 6) but it is associated with more regular condom use (26.4% Vs 22.4%) and less number of sexual partner (29.9% Vs 38.8% with multiple partners). Not residing in the campus dormitory was significantly associated with ever starting sexual intercourse (OR=3.1 95% CI 1.6, 5.98) (table 6).

Table 6 predictors of sexual intercourse among students in Dire Dawa University, 2009

Variables		No(%)	OR, 95% CI (crude)	OR, 95% CI (Adjusted)
Age of the student	10-14	184(20.1)	1	1
	15-19	709(77.5)	3.23(2.17,4.8)	2.88(1.8,4.53)
	20-24	22(2.4)	9.12(3.45,24)	9.5(3.2,27.8)
Sex of the student	M	524(57.3)	1	1
	F	391(42.7)	0.36(0.27,0.47)	0.74(0.52,1.05)
Field of study	Social science	327(35.8)	1	1
	Natural science	588(64.2)	0.9(0.68,1.18)	1.41(1.02,1.94)
Religion	Orthodox	619(67.9)	1.05(0.7,1.57)	1.03(0.61,1.74)
	Protestant	150(16.4)	1.02(0.62,1.68)	1.63(0.89,2.96)
	Catholic	10(0.9)	0.69(0.62,1.68)	1.02(0.21,4.97)
	Other	15(1.6)	1.08(0.36,3.25)	1.24(0.32,4.76)
	Muslim	121(13.2)	1	1
Drink alcohol(male)	Yes	313(59.7)	2.85(1.98,4.1)	2.73(1.72,4.33)
	No	211(40.3)	1	1
Drink alcohol(female)	Yes	90(23)	3(1.8,4.9)	2.13(0.98,4.61)
	No	301(77)	1	1
Chew chat(male)	Yes	153(29.2)	2.7(1.82,4.01)	2.02(1.19,3.42)
	No	371(70.8)	1	1
Chew chat(female)	Yes	43(11)	4.04(2.11,7.75)	2.68(0.97,7.44)
	No	348(89)	1	1
Smoking habit	Yes	64(7)	4.84(2.73,8.59)	1.44(0.71,2.90)
	No	851(93)	1	1
Use addictive drug	Yes	52(6)	6.48(3.28,12.79)	2.16(0.97,4.82)
	No	863(94)	1	1
Watch sex film	Yes	328(36)	2.95(2.23,3.91)	2.11(1.51,2.96)
	No	587(64)	1	1
Peer sexually active	Yes	480(52.4)	1.59(1.22,2.09)	1.97(0.84,1.64)
	No	435(47.6)	1	1
Influenced by peer to make sex	Yes	275(30.1)	1.29(0.97,1.72)	0.67(0.47,0.97)
	No	640(69.9)	1	1
Discuss on HIV with peer	Yes	662(72.3)	1	1
	No	253(27.3)	1.48(1.11,1.99)	1.51(1.04,2.2)
Discuss on HIV with family	Yes	525(57.3)	1	1
	No	390(42.7)	1.66(1.27,2.18)	1.27(0.91,1.78)
Participation in AACs	Yes	254(27.8)	1	1
	No	661(72.2)	1.06(0.79,1.43)	0.96(0.68,1.36)
Live in the campus dormitory	Yes	857(93.6)	1	1
	No	58(6.4)	3.49(1.98,6.15)	3.1(1.6,5.98)

Qualitative part

Four focus group discussions were conducted among senior and fresh students, male and female students containing 6 to 7 participants.

Most discussant agree that the students are at high risk for HIV/AIDS because of their risky sexual behavior. A male senior student expressed his view like this

”Even if your research found small prevalence of HIV among students, please make it higher so that the student would be afraid of it. Here the sexual behavior of the student is like animals.”

Most partipant agree that the students have multiple number of sexual partner and rarely making safe sex. A female senior student said the following:

”Most students do have sexual partner at home but they will have also another in the univrsity by saying it is life”. ”They do not make any testing for HIV/AIDS.” she added also ”A significant number of female students do have multiple sexual partner and they defend their action by the following say”

”one for love and the other for business(**አንድ ለፍቅር አንድ ለቢስነስ)**”

”have the capital and search for profit(**ዋናን ደዞ በትርፍ መንቀሳቀስ)**”

A fresh student said the following on condom use ”If you go around the lecture room and the compound, you will find several used condoms. That does not mean all students use condom, when they are in hurry they avoid it or inappropraitly use it. Some students also do not have the knowledge how to use a condom.”

A senior male student said that most students do have pornographic film in their mobil, they usually watch it with their partners to initiate them for sexual intercourse which usually end up in risky sexual intercourse as they are in hurry to use condom.

The participant also agree that substance use is common in the university followed by risky sexual behaviour. A male senior student explained it like this

”If you search for Hashish in the campus, you will find 100kg”. ”Here the students are far from home village and they enjoy full freedom. So they do every thing chew chat, drink alcohol, smoke, and use addictive drug, all of them found around the campus compound. After this nearly all engage in risky sexual activity. There are few who used chat for studing.”

Almost all the discussants agree that all of the university students have complete knowledge on HIV/AIDS. They say thet it differes between urban and rural, communicative and non-communicative students. Even if they have the knowledge, they lack the skill to avoid risky sexual behaviour

The discssants were also asked about same sex partnership, most agree that all sexual partnership are not with opposite sex. There are some students who have same sex partner. One first year student said, ”I met one student who later came close friend of mine. We used to go to cafe, class and recreation together but one he asked me strange question to make sex with him, after that day I abondand him.”

Discussion

The main findings of the study include: the prevalence of HIV among students was 2.5% and 38.9% of the students were sexually active before marraige. The mean age of sexual commencement was 18.3 ±1.7years. Majority 87.9% of the students started sex before joining the university and only 25% use condom during each sex. The sexual orientation showed that 7.5% of the students do have sexual partner of similar sex. The likely hood of HIV infection was more in natural science students, and in those who have sexual contact with non-regular partner and similar sex. Sexual initiation before marriage is associated with being in natural science faculty, alcohol drinking, chewing chat and watching pornographic films.

The participants of the study were selected using systematic random sampling to increase the participation from each faculty and department at it is easier and needs no frame. There is also no evidence of cyclic repletion in the sampling frame. Some of the the 95% confidence interval in the research are wide, this might show the inadquecy of the sample and prevalecnce to perform internal comparison and more variation among individual values.

Due to following limitation caution should be taken during interpretations of the study results

- The study was based on self-reported behaviors, and the data might be subjected to reporting errors of unknown direction and magnitude (may be under or over ported).
- Since the data were cross-sectional, the direction of causal relationships between variables cannot always be determined.

The seroprevalence of HIV was found 2.5% (2.3% in female and 2.7% in male and 2.5% for age 15-24 years). This figure is lower than the study in Jimma university students found the prevalence 12.3% which was conducted on student after some years of work experience and most were married. The figure is also lower than the 2006 sentinal suveilance for 15-24 years

which used pregnant women who are sexually active as sample for the study. However, it is higher than the study conducted in three secondary schools of Addis Abeba (6) which was 0.3% and the study in high school students of Gondar which was 1.1% (18), in this two studies the sample size was smaller than the current study, the antibody test for HIV was different and the participants were with almost similar social and cultural background, inaddition time difference between the two study matter.

The study found that seropositivity was slightly higher among 1st year students (2.6%) but same for 2nd(2.5%) and 3rd(2.5%) year students which is different from the study in Jimma Univeristy where the prevalence was higher in 3rd year(19.8%) and lower in 2nd year(12.3%) (7). This descripancy may be due to the difference in sampling method and sample size used in the two study.

The HIV positivity was significantly higher in students of natural science than social science faculty. They also started sexual intercourse earlier than social science students. This may be explained by that the student in natural science face stressful time due to the difficult nature of the field then they involve in overt joy, drinking and dancing which might lead them to risky sexual behavior. This also supported by the focus group discussants. In addition, it may be related to that most natural science students 166(50.7%) are from urban areas where the social and cultural belief affects the students sexual behavior and increase the risk of HIV infection.

Of the 915 participants, 356(38.9%) (48.9% of male and 25.6% of female) had sexual experience before marriage prior to the study. The finding is comparable with the sexual intercourse prevalence among Namibian school youth (13). But it is lower than the study conducted in Gondar college of health science students 56.1% were sexually active medical students (4) and it is higher than the study conducted among Agaro high school students 25% were sexually active

(12). The difference in the result might be due that the participants in Gondar consists of post-basic students, as they may join the university after work experience and the participants in Agaro were found at earlier age than the current study.

Among 15-19 year olds, (35)19% reported being sexually experienced compared to (306)43.2% 15(68.2%) of 20-24 and 25-29 year olds. As age increase the likely of sexual activity increase. This finding is comparable with the study conducted in South African youth in 2004 (10).

The study found mean age at first sexual commencement was 18.3 ±1.7years (for males 18.3 ±1.7 and for female 18.4 ±1.4years). This finding is higher than that the study conducted in Agaro high school students (male 16.45 years and female 16.8 years) in 2001 (12) this may be due to the difference in sample participants where the current study included students from different region and ethnic group besides more proportion of informed and empowered students are found in University than high school. However, it is comparable with the study conducted in Bahir Dar out of school youth which was 17.7.±2 (11).

Thirty nine percent of sexually active participant (44.9% of male and 24% of female) had sexual intercourse with non regular partner. It is also seen that males tended to be to have sex with non-regular sexual partners than females. Having sex with non-regular partner is significantly associated with HIV positivity among sexually active. This finding is comparable with the study conducted in out of school youth in Bahir Dar, 40.6% male and 24.7% female had sex with non-regular partner (11) and the 2005 DHS result that both women and men who had a higher-risk sexual partner in the 12-month period before the survey are more likely to be HIV-infected than those who were sexually active but did not have sex with a higher-risk partner (14) but it is much higher than the study conducted in Gondar college of medical science where 7.7% made sex with

commercial sex worker (4) this difference may be that casual partner for non-fee also included as non-regular partner.

The likely of HIV infection increase in those students who have sexual relationship with same sex. This finding is similar with the study among university students in Free State, South Africa and Edinburgh, Scotland (19, 15).

Among those who reported having sexual intercourse, 116(32.6%)(35.9% of male and 24% female) indicated that they had had more than one sexual partner. Male are more likely to have more than one partner than female. This indicates that such risky behavior can predispose the students to acquisition HIV infection. This result is comparable with the study conducted in South African youth, 27% indicated that they had had more than one sexual partner and males were more likely than females to report more than one sexual partner (10). The HIV/AIDS behavioral surveillance survey in Ethiopia showed, among those who had had sex during the previous 12 months, 22.7% (31.2% of males and 2.7% of females) reported having had sex with more than one partner. Males were 12 times more likely to have had more than one sexual partner than females (95%CI 5.6, 24.7) (7). The study among Bahir Dar youth and Agaro high school students also found a comparable result that's 35.6% of all participants and 40% of male do have more than one sexual partner (11, 12).

One-fourth (25%) of the participant who reported having sex in the past reported always using condoms with sexual partner and 38.2% indicated that they never used condoms with their sexual partner. This is comparable with DHS 2005 findings, One-third (33%) of youth who reported having sex in the past 12 months reported always using condoms with their most recent partner and 31% indicated that they never used condoms with their most recent partner (14). However, it is much higher than the study conducted in Gondar medical college students where

regular condom use was reported by only 6.4% of the students (4). This may be due to that the time difference and knowledge difference between the two study participants.

Among participants who engaged in sexual intercourse with non regular partner, only 49.6 percent of male and 20.8 percent of female reported condom use always, which puts these students at a higher risk of acquiring sexually transmitted diseases including HIV/AIDS. This also indicated in the 2005 behavioral surveillance, of the 112 male participants who engaged sex with commercial sex worker, only 41 (37%) used a condom every time (7).

Having ever used alcohol and chewing chat was a risk factor for ever having sexual contact among male. The association of alcohol and sexual intercourse is supported by the study among youth in Lusaka, Zambia and Namibian school youth (16, 13). The association of Chat chewing and sexual intercourse is comparable with the finding among out of school youth in Bahr Dar, Ethiopia (11).

Being influenced by peer has protective effect for ever starting sexual intercourse but discussion with peer on HIV/AIDS issue increases the probability of ever starting sexual intercourse. This might be due to that the participants of the study are academically better youth and self reliant so they are less likely to be influenced by peers.

Not residing in the campus dormitory was significantly associated with sexual intercourse (OR=3.1 95% CI 1.6, 5.98). This might be due to that as the students live outside the campus dormitory, they enjoy less restriction and increase their communication with the community where their exposure to substance and addictive drugs might increase and result in risky sexual behaviors.

Knowing at least three major ways of HIV/AIDS prevention was protective against HIV positivity. This is also supported by study conducted among the Zambian youth, having

knowledge of HIV/AIDS was protective against ever having had sex for both genders. Among males, it was also protective in reducing the number of partners over a lifetime, reducing the likelihood of having had more then one partner in the last three months, and of increasing the likelihood of using a condom at last sex (16).

Conclusion

The prevalence of HIV among University students is not as high as the expected but there are several risky sexual behaviors like multiple sexual partnership, incosistent condom use and sex with similar gender which increase the likely of contracting HIV infection

The risk of HIV increases with type of sexual partner. Students who have sexual relation with non regalr partner are more likely to be HIV positive. Students who have complete knowledge on HIV prevention methods are less likely to be HIV positive.

The habit of watching pornographic film, drinking alcohol and chewing chat increase the likely of starting sexual intercourse before marriage. In addition living outside the campus with friends or self rented house increase the chance of starting sexual intercourse.

Recommendations

Even though the majority of the students had adequate knowledge about HIV/AIDS prevention and transmission, practice of risky sexual behavior is high. There fore, HIV education and life skill training should be given or strengthened to bring behavioral change and avoid risky sexual behavior among students. Services that promote protective sexual behavior should be also integrated in the univerity, like VCT, condom distribution, STD diagnosis and treatment.

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Appendix

Consent form

HIV testing consent form

Hello, my name is Birhan Mengistu and I am from the Joint Gondar and Addis continental institute of public health MPH student, is currently carrying out master thesis on sexual behavior among Dire Dawa University students. As part of this research we are collecting information on HIV status among students of the University systematically sampled by collecting blood for conducting an HIV test. HIV is the virus that causes AIDS. The HIV test is being done to help the concerned body to find out how common it is and its rate of spreading. This enables the program planner and implementer to devise means of controlling and preventing the spread of the disease and also strengthen prevention activities. But to do this it needs reliable information. That is why we are now collecting a few drops of blood from a finger tip for the HIV test. The instruments I use for taking the blood are completely clean, sterile and safe. The samples will be coded so that all the information will be kept anonymous. The blood sample will be used for the research purpose only. No identifiers such as names will be attached to the test. So we will not be able to tell you the test result. No one else will be able to know your test results either. If you want to know whether you have HIV, I can provide a voucher for you to go to the nearest health institution, which provides VCT, that is, counseling and a test for HIV.

Do you have any questions so far?

May I now ask you to participate in the test? You can say yes to the test or you can say no.

It is up to you to decide. Will you take the test?

Yes_____ No _____

Signature of interviewer _____

የኤች. አይ.ቪ./ምርመራ ስምምነት ቅጽ

ጤና ይስጥልኝ! ስሜ ብርሃን መንግስቱ ይባላል የመጣሁት ጎንደር ዩኒቨርሲቲ ና አዲስ ኮንቲኔን ል ጤና አጠባበቅ ኢንስቲቱት በጋራ ባቋቋሙት ትምህርት ቤት ስሆን የማስተር ዲግሪ መመረቂያ ፕናቴን የሰራሁ ገኛስሁ። የመመረቂያ ፕናቴም በወሲባዊ ባህሪያት ላይ ያተኮረ ነው። የዚህ ፕናት አንዱ አካል የሆነው የተማሪችን ደም በመውስድ በሚስጥራዊ ሁኔ ኤች. ይ.ቪ. ምርመራ ማከናወን ነው። ኤች.አይ.ቪ. ኤድስን የሚያመጣው ተህዋሲያን ሲሆን ምርመራው የሚከናወንበት ምክንያት ከኤች.አይ.ቪ. ጋር ተያያዥነት ያሳችውን ባህሪዎች ስማወቅ ነው። የዚህም ፕናት ውጤት በኤች.አይ.ቪ. ዙሪያ የሚንቀሳቀሱ ድርጅቶችም ሆኑ ግለሰቦች ፕናት ላይ መሰረት ያደረገ የመከላከል ስራውን ንዲያጠናክሩ ይረዳል። ነገር ግን ይህን ስማከናወን ተአማኒነት ያለው መረጃ ያስፈልጋል። በመሆኑም ይህ ከጣት ላይ በሚወሰድ ደም የሚከናወነው ምርመራ አስፈላጊ ነው። ምርመራውን ስማከናወን የምንጠቀምበት መሳሪያች በሙሉ ንፁህናችው የተጠበቀ፤ ከጀርም ነጻ የሆኑና ምንም ጉዳት የማያስከትሉ ናቸው። ይህ ምርመራ የሚከናወናወነው ስፕናቱ አገልግሎት ብቻ ሲሆን ሚስጥራዊነቱም የተጠበቀ ነው በመሆኑም የማንኛም ተመርማሪ መለያ ወይም ስም አያስፈልግም። ስለዚህም ውጤቱን ማወቅ አስፈላጊ አይደለም። ምርመራውንም የሚያከናውኑት ባለሙያች የማ ውጤት ምን ንደሆነ ማወቅ አይችሉም።

ነገር ግን የምርመራ ውጤቱን ስማወቅ ስሚፈልግ የበሄራዊ ኤቭ..አይ.ቪ./ኤድሰ የምክርና ምርመራ መመሪያ በሚያዘው መሰረት ውጤቱ ይነገራል። በተጨማሪም በድሬዳዋ ውስጥ የሚገኙ የምርመራ ጣቢያች ውስጥ ስመመርመር የሚያስችል የሪፈራል ወረቀት በመውሰድ ምርመራውን በማንኛው ሰዓት ማከናወን ይቻላል።

ስለዚህ ስምርመራው ተሳ ፊ ንድትሆን/ኚ መጠየቅ ችላለሁ? ፍቃደኛ ካልሆንክ/ሽ ንቢ ማለት ይቻላል። የመወሰን መብትህ/ሽ የተጠበቀ ነው።

አሁን ስምርመራው ፍቃደኛ ነህ/ነሽ?

አ----------የስም----------

የጠያቂው ስም----------

ፊርማ----------

Study Data collection tools

Socio-demographic

1. Region you came from_____

2. Residences before university

1. Regional town 2. Zonal town 3. Wereda town 4. Rural town 5. If other_____

3. Sex

1. Female 2. Male

4. Age_____

5. Class year

1. 1st year 2. 2nd year 3. 3rd year

6. Department_____

7. Religion

1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other_____

8. Marital status

1. Single 2. Married 3. Separated 4. Divorced 5. Other_____

9. Ethnicity_____

10. Average monthly family income in birr

1. 1-600 birr 2. 601-1200 3. 1201-1800 4. Greater than 1800

5. I don't know

11. How do you perceive your family economic status vis-à-vis your neighbor?

1. High 2. Medium 3. low

12. The average money you spent per month

1. <100 2. 100-300 birr 3. 301-500birr 4. >500

Sexual behavior

13. Have you ever had sexual intercourse?

1. Yes 2. No if no go to question number 24

14. If yes at what age did you first had sex?

Age in years____

15. Where did you start sex?

1. In the University

2. Before the university

16. The type of sexual relationship you had before

1. with opposite sex 2. with similar sex 3. with both sex

17. Of the following people who had been your sexual partner? (Encircle all possible answer)

1. Regular partner 2. Commercial sex worker 3. Casual partner 4. Person who had multiple sexual partners 5. person who had STD 6. old men 7. old women

8. other specify

18. How many sexual partners did you have in the past? (Including the current partner)

1. one 2. two 3. three 4. more than three

19. what was the mode of sexual intercourse you practiced

1. vaginal 2. Anal 3. oral 4. a and b 5. b and c 6. a and c 7. all

20. The last time you had sex with a sexual partner; did you and your client use a condom?

1, Yes 2. No

21. With what frequency did you and your entire sexual partner use condoms over the past years?

1. Every time 2. Sometimes 3. Never

22. Did you experience genital ulceration or discharge in your life time?

1. yes 2. no

23. If yes where did you treated

1. Public health facility 2. private health facility 3. pharmacy

4. Traditional healer 5. self treatment 6. Holy water 7. other (specify)

Alcohol and other substance

24. Do you have a habit of drinking alcohol in the past years?...(including tela, teg , Areke,bear and the like)

1. Yes 2. No if no go to question no 29

25. If yes how often do youdrink alcohol?

a. Every day b. At least once a week c. once a week d. other specify____

26. Did you have any experience of sexual contact with sexual partner immediately after drinking alcohol?

1. Yes 2. No

27. Did you use condom during sexual intercourse after drinking alcohol?

1. yes 2. No

28. If yes how often do you use condom

a. Every day b. At least once a week c. once a week d. other specify____

29. Do have a habit of chewing chat?

1. Yes 2. No if no go to question number 34

30. If Yes how often you chew chat

a. Every day b. At least once a week c. once a week d. other specify____

31. Did you have any experience of sexual contact immediately after chewing chat?

1. Yes 2. No

32. Did you use condom during sexual intercourse after drinking alcohol?

1. yes 2. No

33. If yes, how often do you use condom?

1. Every time 2. almost every time 3. Sometimes 4. Never

34. Do you smoke cigarettes? 1. Yes 2.No

35. If Yes how often do you smoke cigarettes?

a. Every day b. At least once a week c. once a week d. other specify____

36. Some people have tried a range of different types of drugs. Which of the following, if any, have you tried?

	Yes	No
SHISHA (GAYA)		
BENZENE		
HASHISH		
MANDRAX		
COCAINE		
CRACK		

37. If the answer for question number 36 is yes, how often do you use these substances in the past?

a. Every day b. At least once a week c. once a week d. other specify____

38. Did you have any experience of sexual contact immediately after using substtance?

1. Yes 2. No

39. Did you use condom during sexual intercourse after drinking alcohol?

1. yes 2. No

40. If yes, how often do you use condom?

1. Every time 2. almost every time 3. Sometimes 4. Never

41. Do you watch pornographic film a. yes b. no if no go to question no 39

35. If Yes how often you watch

a. Every day b. At least once a week c. once a week d. other specify____

42. Did you have any experience of sexual contact immediately after pornographic film?

1. Yes 2. No

43. Did you use condom during sexual intercourse after watching pornographic film?

1. yes 2. No

44. If yes, how often do you use condom?

1. Every time 2. almost every time 3. Sometimes 4. Never

Peer pressure

45. Do you have a friend (non-sexual) who is sexually active in the past?

1. Yes 2. No

46. Do you have a friend (non-sexual) with multiple sexual partners in the past?

1. Yes 2. No

47. Do you have a friend (non-sexual) who discourage condom use during sexual intercourse in the past ?

1. Yes 2. No

48. Have you been influenced for sex by your friends?

1. yes 2 . No

Knowledge and attitude on HIV/AIDS

49. What are the major ways of HIV/AIDS transmissions? (Encircle all possible answers)

1. Unsafe sex 5.Unsafe injection

2. Blood transfusion 6.I don't Know

3. Mother to child 7.comdom use

4. Kissing 8.Eating together with HIV infected person

9. other, specify

50. What are the major ways of preventing HIV/AIDS? (Encircle all possible answer)

1. Abstaining from sexual relationship 8.Avoiding sexual relation with sex worker

2. Be faithful to one sexual partner 9.Limiting number of sexual partner

3. Regular condom use in any casual sexual intercourse 10.useing holy water

4. Avoiding blood transfusion 11.eating good food

5. Avoiding unsafe injection 12.Washing genital area after sexual intercourse

6. Using oral and injectable contraceptive 13.making anal sex/oral sex

7. Having boy/girl friend 14.Making sex with old men/women

15. Having sexual relationship with the same sex (Male-to –Male/Female-to- Female)

16. other, specify

Communication factor

51. Have you openly discussed about HIV/AIDS with your partner/peer in the past? With a dormitory mate? With someone in your campus?

1. Yes 2. No

52. Have you openly discussed about HIV/AIDS with your parents/family in the past?

1. Yes 2. No

Perceived susceptibility

53. What are your chances of getting infected with HIV?

1. No chance 2. Low chance 3. Moderate 4. High

54. If your response is NO or LOW chance why?

1. I never had sexual contact 2. Abstained from sexual intercourse

3. I trust my sexual partner 4. No injection with un sterile needles

5. I always use condom 6. Healthy; no contact with HIV infected person(s)

7. Other_____

55. If your answer is MODERATE or HIGH, why?

1. I had sexual contact with HIV positive partner

2. I had sexual contact with out condom

3. I had sex with multiple sexual partners

4. I had sex with commercial partner

5. Condom breakage

6. I had un sterilized injection

7. Other_____

Sexual violence

56 Have you ever had any of the following violence with in the past time?

1. unwanted kissing 4. biting

2. touching private area 5. some thing taken from your hand

3. Insulting 6. other (specify)

57 Have you ever been forced to have sexual intercourse when you did not want to?

1. Yes 2. No

School/Institutional factor

58. Do you participate in anti AIDS activity in the University, or any other or NGO like Family Guidance Association of Ethiopia?

1. Yes 2. No

59. Have you ever test for HIV/AIDS?

1. yes 2, No

60 .where is you residence currently

1. campus 2. non campus/rented 3. Family home 4. other (specify)

61. Do you use the student café in the campus? 1. Yes 2. No

62. How frequent do you use the student café (to get your food)?

1. Every time 2. almost every time 3. Sometimes 4. Never

To be filled by the counselor

63. Are you willing to give blood for the research?

1. Yes 2. No

64. Testing result

a. Reactive b. Non reactive c. Invalid

Question guide for FGD

1. Do you think University student have good knowledge on HIV/AIDS
2. Do you think University students have multiple sexual partners?
3. Do you think University students Use condom consistently?
4. Do you think University students have risk of getting HIV/AIDS?
5. Do you think University students discuss clearly on HIV/AIDS with peers and sexual partners?
6. Do you think University students are pressured by peer to behave like their peers (to go to night club, to Chew chat, to drink alcohol etc)
7. Do you think University student practice forced sex?
8. Do you think non-café students are at risk of HIV/AIDS?

ጎንደር ዩኒቨርሲቲ

ከአዲስ ኮንቲኔን ል የህብረተሰብ ጤና ማ ከል

የተማሪው ስም፡ ብርሃን መንግስቱ

የአማካሪው ስም፡ ፕሮፌሰር የማነ ብርሃኔ ዶ/ር በላይነህ ግርማ

በተማሪዎች የሚሞላ የአማርኛ መጠይቅ

የመጠይቁ አላማ በዩኒቨርሲቲ የሚገኙ ተማሪዎች ስኬች.አይ.ቪ./ኤድስ የሚያጋልጡ ባህሪያትን ለይቶ ማውጣትና ንዚህን ባህሪያት ሊያስቀሩ የሚችሉ መፍትሔዎችን መፈለግ ነው፡፡ ስዚህ መጠይቅ የምትሰጠው/ጭው ምላሽ ለምርምሩ አላማ ብቻ የሚውል መሆኑን ለመግለፅ ንወዳለን፡፡ ለመጠይቁ የምትሰጠው/ጪው ምላሽ የማስተር ዲግሪ ለማጠናቀቅ ጅግ አስፈላጊ ስለሆነ አትኩሮት በመስጠት ምላሽህን/ሽን ንድትሰጠን/ጭን በአክብሮት ንጠይቃለን፡፡ ይህንን በማድረግ ለጥናቱ መሳካት ከፍተኛ አስተዋፅዎ ስላበረከትክልን/ሽልን ጅግ ናመሰግናለን፡፡

መግለጫ

- ይህ መጠይቅ ተማሪዎችን ስኬች.አይ.ቪ./ኤድስ ሊያጋልጡ የሚችሉ ባህሪያት ላይ ያተኩራል፡፡
- በመጠይቁ ትክክለኛ ወይንም የተሳሳተ የሚባል መልስ የለውም ኛ የምንፈልገው ባንተ/ቺ ይ ትክክል ነው የምትለውን/ይውን ነው፡፡
- በመጠይቁ ላይ ያሉትን ጥያቄዎች በሙሉ በመመለስ ለጥናቱ መሳካት አስተዋፅዎ ንድ በረክትልን/ችልን በአክብሮት ንጠይቃለን፡፡
- በመጠይቁ ላይ ስም መፃፍ አያስፈልግም፡፡
- መጠይቁ 9 ክፍሎችና 70 ጥያቄዎች አሉት፡፡
- ለጥያቄዎቹ ትክክለኛ የምትለውን/ይውን መልስ በማክበብ ወይም የራስህን/ሽን መልስ በመፃፍ መልስ/ሽ፡፡
- የመጨረሻው ክፍል በአስተባባሪዎች የሚሞላ ይሆናል፡፡

መጠይቁ የተሞላበት ቀን----------

I. ማህበራዊ ኢኮኖሚያዊና የስነህዝብ ሁኔ

1. ከየት ክልል ነው የመጣከው/የመጣሽዉ----------

2. ዩኒቨርሲቲ ከመግባትህ/ሽ በፊት የምትኖርበት/ሪበት ቦ

1. የክልል ከተማ 2. የዞን ከተማ 3. የወረዳ ከተማ 4. ገጠር 5. ሌላ መልስ ካለ ጥቀስ/ሽ---

3 ፃ

1. ወንድ 2. ሴት

4 ድሚ----------

5 በዩኒቨርሲቲው የስንተኛ አመት ተማሪ ነህ/ሽ?

1. አነደኛ 2. ሁስተኛ 3. ሶስተኛ

8 የምን ዲፓርትመንት ተማሪ ነህ/ሽ?----------

9 የየትኛው ምነት ተከ ይ ነህ/ሽ?

1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስተንት 4. ካቶሊክ 5. ሌላ ካለ ጥቀስ/ሽ--------

10 የጋብቻ ሁኔ

1. ያላገባ/ች 2. ያገባ/ች 3. የተለያየ/ች 4. የተፋ /ች 5. ሌላካለ ጥቀስ/ሽ --------

11 የየትኛው ብሄረሰብ አባል ነህ/ሽ?----------

12 ቤተሰብህ/ሽ በወር በአማካኝ የሚያገኙት ገቢ በብር

1.ከ600 ብር በ ች 2. ከ601 ሰከ 1200 3. ከ1201 አስከ 1800

4. ከ1800 በላይ 5. አላውቀውም

13 የቤተሰቦችህን/ሽን የገቢ ሁኔ ከጎረቤቶቻችሁ ስ ነፃፅረው

1. ከፍተኛ 2. መካከለኛ 3. ዝቅተኛ

14 በአማካኝ በወር ምን ያህል ብር ጠፋለህ/ፊያለሽ?

1. ከ 100 በር በ ች 2. ከ 101 አስከ 300 3. ከ301 አስከ 500 4. ከ500 በላይ

II. የግል ባህሪያት

15 የግብረ ስጋ ግንኙነት ፈፅመህ/ፈፅመሽ ውቃለህ/ሽ?

1. አዎ 2. አላውቅም(መልሱ አላውቅም ከሆነ ወደ ጥያቄ ቁጥር 24 ሰፍ/ፊ)

16 መልሱ አዎ ከሆነ ለመጀመሪያ ጊዜ የግብረ ስጋ ግንኙነት ስትፈፅም/ሚ ድሜህ/ሽ ስንት ነበር?------

1.13 2. 14 3. 15 4. 16 5. 17 6. 18 7. 19 8. 20 9. 21 10. 22

11. ከዚህ ሌላ መቂስ ካለ ጥቀስ/ሽ----------

17 ወሲብ የጀመርከው/ሽው የት ነው?

1. ከዩኒቨርሲቲ በፊት 2. ዩኒቨርሲቲ ውስጥ

18 ከዚህ በፊት ምን አይነት የወሲብ ግንኙነት ነበረህ/ሽ?

1. ከተቃራኒ ፃ 2. ከተመሳሳይ ፃ 3. ከሁለቱም ፃ ጋር

19 ባለፉት ጊዜያት ከሚከተሉት ውስጥ የወሲብ ጓደኛህ/ሽ የነበረው የቱ ነው? (ከአንድ በላይ መልስ ካለ ይከበብ)

1. ቋሚ ጓደኛ 2. በክፍያ የተገናኘኋት/ሁት 3. በድንገት/በአጋጣሚ የተገናኘኋት/ሁት

4. ከአንድ ባለይ የወሲብ ጓደኛ ካለው/ካላት ጋራ 5. በ ድሜ ከሚበልጠኝ ወንድ ጋር(ሹገር ዳዲ)

6. በ ድሜ ከምትበልጠኝ ሴት ጋር(ሹገር ማሚ)

7. ሌላ መልስ ካለ ጥቀስ/ሺ----------

20 ባለፉት ጊዜያት ስንት የወሲብ ጓደኞች ነበሩህ/ነበሩሽ?

1. አንድ 2. ሁለት 3. ሶስት 4. አራትና ከዚያ በላይ

21 በአለፉት ጊዜያት ከሚከተሉት የወሲብ አይነቶች የትኛውን ፈፅመሃል/ሻል?

1. በብልት 2. በፊንጢጣ 3. በአፍ 4. በብልትና በፊንጢጣ 5. በፊንጢጣና በአፍ

6. በብልትና በአፍ 7. በብልት፡ በፊንጢጣ፡ ንዲሁም በአፍ

22 በመጨረሻ ወሲብ ከፈፀምከው/ሽው ሰው ጋር ኮንዶም ተጠቅመሃል/ሻል?

1. አዎ 2. አልተጠቀምኩም

23 ባለፉት ጊዜያት ወሲብ ከፈፀምከው/ከፈፀምሽው ሰው ጋር በግብረ ስጋ ግንኙነት/ግንኙነቶች ወቅት በምን ያህል ድግግሞሽ ኮንዶም ትጠቀማለህ/ሺ?

1. ሁል ጊዜ 2. አብዛኛውን ጊዜ 3. አንዳንድ ጊዜ 4. ምንም አልፎቀምም

24. በዩኒቨርሲቲው ውስጥ/በቅርብ አካባቢ ስለ አባለዘር በሽ መረጃና ህክምና የሚሰጥ ተቋም አለ?

1. አዎ 2. የለም 3. ሌላ መልስ ካለ ጥቀስ/ሽ----------

25 ከዚህ በፊት ብልት አካባቢ ቁስል ወይም ፈሳሽ አጋጥሞህ/ሽ ያውቃል?

1. አዎ 2. አይ አላውቅም

26 ከዚህ በፊት ብልት አካባቢ ቁስል ወይም ፈሳሽ ካጋጠመህ/ሽ የት ህክምና ወሰድክ/ወሰድሽ?

1. የመንግስት ጤና ተቋም 2. የግል ጤና ተቋም 3. ፋርማሲ 4. ባህል ህክምና 5. ጠበል ሄድኩ

7. ሌላ መቂስ ካለ ጥቀስ/ሽ----------

<u>III. አልኮልና ሌሎች</u>

27 የአልኮል መጠጥ ጠጥተህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም (መልሱ አይ ከሆነ ወደ ጥያቄ ቁጥር 32 ለፍ/ፊ)

28 አልኮል መጠጥ በየስንት ጊዜው ትጠጣለህ/ጪለሽ?

1. በየቀኑ 2. በሳምንት አንዴ 3. በሳምንት ከአንዴ በላይ 4. ሌላ ካለ ጥቀስ/ሽ ----------

29 መጠጥ ከጠጣህ/ሽ በኋላ ወሲብ ፈፅመህ ውቃለህ/ቂያለሽ?

1. አዎ 2. አልጠቀምም

30. መጠጥ ጠጥተህ/ሽ ወሲብ ስትፈፅም/ሚ ኮንዶም ትጠቀማለህ/ሚያለሽ?

1. አዎ 2. አልጠቀምም

31 የጥያቄ ቁጥር 30 አዎ ከሆነ ኮንዶም በምን ያህል ድግግሞሽ ትጠቀማለህ/ሚያለሽ?

1. ሁል ጊዜ 2. አብዛኛውን ጊዜ 3. አንዳንድ ጊዜ 4. ምንም አልጠቀምም

32 ጫት ቅመህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም(መልሱ አይ ከሆነ ወደ ጥያቄ ቁጥር 37 ለፍ/ፊ)

33 ጫት በየስንት ጊዜው ትቅማለህ/ሚያለሽ?

1. በየቀኑ 2. በሳምንት አንዴ 3. በሳምንት ከአንዴ በላይ 4. ሌላካለ ጥቀስ/ሽ ----------

34 ጫት ከቃምክ/ሽ በኋላ ወሲብ ፈፅመህ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም

35. ጫት ቅመህ/ሽ ወሲብ ስትፈፅም/ሚ ኮንዶም ትጠቀማለህ/ሚያለሽ?

1. አዎ 2. አይ አልጠቀምም

36 የጥያቄ ቁጥር 35 አዎ ከሆነ ኮንዶም በምን ያህል ድግግሞሽ ትጠቀማለህ/ሚያለሽ?

1. ሁል ጊዜ 2. አብዛኛውን ጊዜ 3. አንዳንድ ጊዜ 4. ምንም አልጠቀምም

37 ሲጋራ አጭሰህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም(መልሱ አይ ከሆነ ወደ ጥያቄ ቁጥር 39 ስፍ/ፊ)

38 ሲጋራ ካጨስክ/ሽ በየስንት ጊዜው ጨሳለህ/ሻለሽ?

1. በየቀኑ 2. በሳምንት አንዴ 3. በሳምንት ከአንዴ በላይ 4. ሌላ መልስ ካለ ጥቀስ/ሽ ----

39 አንተ/ቺ ከዚህ በፊት አነቃቂ እፅ ከተጠቀምክ/ሽ የትኛዉን አይነት እፅ ወስደህ/ሽ ውቃለህ/ቂያለሽ?

1. ጋያ/ሲሻ 2. ቤንዚን 3. ሀሺሽ 4. ማንድራክስ 5. ኮኬይን 6. ክራክ 7. ማሪዋና 8. በመርፌ የሚወሰድ ፅ

9. ሌላካለ ጥቀስ/ሽ -- 10. አይ አልጠቀምም (መልሱ አይ ከሆነ ወደ ጥያቄ ቁጥር 44 ስፍ/ፊ)

40 አነቃቂ ፅ በየስንት ጊዜው ትጠቀማለህ/ሚያለሽ?

1. በየቀኑ 2. በሳምንት አንዴ 3. በሳምንት ከአንዴ በላይ 4. ሌላካለ ጥቀስ/ሽ ----------

41 አነቃቂ ፅ ከተጠቀምክ/ሽ በኋላ ወሲብ ፈፅመህ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም

42 አነቃቂ ፅ ተጠቅመህ/ሽ ወሲብ ስትፈፅም/ሚ ኮንዶም ትጠቀማለህ/ሚያለሽ?

1. አዎ 2. አይ አልጠቀምም

43 የጥያቄ ቁጥር 42 አዎ ከሆነ ኮንዶም በምን ያህል ድግግሞሽ ትጠቀማለህ/ሚያለሽ?

1. ሁል ጊዜ 2. አብዛኛውን ጊዜ 3. አንዳንድ ጊዜ 4. ምንም አልጠቀምም

44 የወሲብ ፊልም አይተህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም (መልሱ አይ ከሆነ ወደ ጥያቄ ቁጥር 49 ስፍ/ፊ)

45 የወሲብ ፊልም በየስንት ጊዜ ያስህ/ሽ?

1. በየቀኑ 2. በሳምንት አንዴ 3. በሳምንት ከአንዴ በላይ 4. ሌላ መልስ ካለ ጥቀስ/ሽ ----

46 የወሲብ ፊልም ካየህ/ሽ በኋላ ወሲብ ፈፅመህ ውቃስህ/ቂያስሽ?

1. አዎ 2. አይ አላውቅም

47 የወሲብ ፊልም አይተህ/ሽ ወሲብ ስትፈፅም/ሚ ኮንዶም ትጠቀማለህ/ሚያለሽ?

1. አዎ 2. አይ አልጠቀምም

48 የጥያቄ ቁጥር 47 አዎ ከሆነ ኮንዶም በምን ያህል ድግግሞሽ ትጠቀማለህ/ሚያለሽ?

1. ሁል ጊዜ 2. አብዛኛውን ጊዜ 3. አንዳንድ ጊዜ 4. ምንም አልጠቀምም

<u>IV. የአቻ ግፊት</u>

49 ካሉህ/ሽ ጓደኞችህ/ሽ ውስጥ ወሲብ የሚፈፅም ኖሮህ/ሽ ያውቃል?

1. አዎ 2. የለም

50 ካሉህ/ሽ ጓደኞችህ/ሽ ውስጥ ከአንድ በላይ የወሲብ ጓደኛ ያለው/ላት ኖሮህ/ሽ ያውቃል?

1. አዎ 2. የለም

51 ካሉህ/ሽ ጓደኞችህ/ሽ ውስጥ ኮንዶም ንዳትጠቀም/ሚ የሚገፋፋ ጓደኛ ኖሮህ/ሽ ያውቃል?

1. አዎ 2. የለም

52 ባለፉት ጊዜያት በአቻ/በጓደኛ ግፊት ወሲብ ንድትፈፅም/ሚ ተፅ ኖ አድሮብህ/ሽ ያውቃል?

1. አዎ 2. የለም

<u>V. የኤች.አይ.ቪ./ኤድስ ጠቅላላ ውቀት</u>

53 ከሚከተሉት ውስጥ ዋና ዋና የኤች.አይ.ቪ. መተላለፊያ መንገዶች የትኞቹ ናቸው? ከአንድ በላይ መልስ ካለ ይከበብ

1. ጥንቃቄ የጎደለው ወሲብ 2. በደም ንክኪ 3. ከ ናት ወደ ልጅ 4. በመሳሳም

5. ጥንቃቄ በጎደለው መርፌ 6. አላውቅም 7. ኮንዶም በመጠቀም 8. በኤች.አይ.ቪ. ከተያዘ ሰው ጋር አብሮ መብላት 9. ሌላ መልስ ካለ ጥቀስ/ሽ ----------

54 ከሚከተሉት ውስጥ ዋና ዋና የኤች.አይ.ቪ. መከላከያ መንገዶች የትኞቱ ናቸው? ከአንድ በላይ መልስ ካለ ይክበብ

1. ከወሲብ መ ቀብ 2. ለአንድ ወሲብ ጓደኛ ማኝ መሆን 3. ኮንዶም ሁሌም መጠቀም

4. የደም ንክኪ በመከላከል 5. ጥንቃቄ የጎደለው መርፌን በመከላከል

6. በኪነንና በመርፌ ያሉ ወሲድ መከላከያዎችን መጠቀም 7. የወንድ/የሴት ጓደኛ በመያዝ

8. ከወሲብ ንግድ ከሚተዳደሩ ሰዎች ጋር ወሲብ አለመፈፀም

9. የወሲብ ጓደኞችን ቁጥር መወሰን 10. ጠበል መጠቀም 11. ጥሩ ምግብ መብላት

12. ከወሲብ በኋላ ብልትን መ ጠብ 13. ወሲብ በፌንጢጣ ወይም በአፍ ማድረግ

14. ወሲብ ድሜው ከገፋ ወንድ/ሴት ጋር መፈፀም

15. ከተመሳሳይ ፃ ጋር ወሲብ መፈፀም 16. ሌላ መልስ ካለ ጥቀስ/ሽ ----------

<u>VI. በኤች.አይ.ቪ. ዙሪያ ውይይት</u>

55 ባለፉት ጊዜያት ኤች.አይ.ቪ/ኤድስን በተመለከተ ከወንድ ወይም ከሴት ጓደኛህ/ሽ *ጋር*፣ ከዶርም ጓደኛህ/ሽ፣ከሌላ ጓደኛህ/ሽ *ጋር* በግልፅ ተወያይተህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አላውቅም

56 ባለፉት ጊዜያት ኤች.አይ.ቪ/ኤድስን በተመለከተ ከቤተሰብ/ወላጆች ጋር በግልፅ ተወያይተህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አላውቅም

<u>VII. ለኤች.አይ.ቪ. የመጋለጥ ሁኔ</u>

57 በኤች አይቪ *የመያዝ* ድልህ/ሽ ምን ያህል ነው ትላለህ/ትያለሽ?

1. *የመያዝ ዕድሉ* የለም 2. ዝቅተኛ 3. *መካከለኛ* 4. ከፍተኛ

58 የጥያቄ ቁጥር 57 መልስህ/ሽ *የመያዝ አጋጣሚ* የለም ወይም ዝቅተኛ ከሆነ ለምን?

1-የግብረ ስጋ ግንኙነት ፈጽሜ 3-ጓደኛዬን አምነዋለሁ/አምና ለሁ

አላዉቅም

2-ከግብረ ስጋ ግንኙነት ለለታቀብኩ

4-ሌላ ሰዉ በተወጋበት መርፌ ተወግቼ

አላዉቅም

5-ሁል ጊዜ ኮንዶም ስለምጠቀም

6- የደም ንኪኪ ስለሌለኝ

7- ሌላ መልስ ካለ ጥቀስ/ሽ ----------

8-አላዉቅም

59 የጥያቄ ቁጥር 57 መልስህ/ሽ የመያዝ አጋጣሚ መካከለኛ ወይም ከፍተኛ ነዉ የሚል ከሆነ ለምን?

1-የደም ንክኪ በኤች አይ ቪ ከተያዘ ሰው ጋር ስላለኝ

2-ያለ ኮንዶም የግብረ ስጋ ግንኙነት ስለፈጸምኩ

3-ከአንድ በላይ የግብረ ስጋ ግንኙነት ስላለኝ

4-በገንዘብ ክፍያ የግብረ ስጋ ግንኙነት ስለፈፀምኩ

5-ኮንዶም ስለተበሳ/ ስለተቀደደ

6-ንፅህናዉ ባልተጠበቀ መርፌ ስለተወጋሁ/ስለታም ነገሮች ስለተጠቀምኩ

7 ሌላካስ ጥቀስ/ሽ ----------

8-አላዉቅም

VIII. ወሲባዊ ትንኮሳ

60 ከሚከተሉት ትንኮሳዎች ውስጥ ያጋጠሙህ/ሽ የትኛው/ኞቹ ናቸው?

1. ሳልፈልግ መሳም 2. ሳልፈልግ አካሌን መነካት/መዳሰስ 3. መሰደብ

4. መመ ት 5. ቃ መወሰድ 6. ሌላ መልስ ካለ ጥቀስ/ሽ ----------

61 ተገደህ ወይም ተገደሽ ወሲብ ፈጽመህ/ፈጽመሽ ውቂያለሽ?

1. አዎ 2. አላዉቅም

IX. የትምህርት ቤት/ድርጅ ዊ ሁኔ

62 ከዚህ በፊት በዩኒቨርሲቲው ፀረ-ኤድስ ክበብ ወይም በሌሎች መንግስ ዊ ባልሆኑ ድርጅቶች ንደ ቤተሰብ መምሪያ ያሉ ውስጥ ተሳትፈህ/ሽ ውቃለህ/ሽ?

1. አዎ 2. አይ አላዉቅም

63 በዩኒቨርሲቲው ውስጥ/በቅርብ አካባቢ በፍቃደኝነት ላይ የተመሰረተ የደም ምርመራ አገልግሎት አለ?

1. አዎ 2. የለም 3. ሌላ መልስ ካለ ጥቀስ/ሽ----------

64 በፍቃደኝነት ላይ የተመሰረተ የደም ምርመራ አድርገህ/ስ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላወቅም

65 በዩኒቨርሲቲው ውስጥ/በቅርብ አካባቢ ኮንደም ማግኘት ይቻላል?

1. አዎ 2. የለም 3. ሌላ መልስ ካለ ጥቀስ/ሽ----------

66 በአሁኑ ወቅት መኖሪያህ/ሽ የት ነው

1. በካምፓስ ውስጥ 2. ከካምፓስ ውጪ ከወንድ/ሴት ጓደኛዩ ጋር ተከራይቼ/ተዳብዩ

3. ከካምፓስ ውጪ ከቤተሰብ ጋር 4. ሌላ መልስ ካለ ጥቀስ/ሽ----------

67 በዩኒቨርሲቲ ውስጥ የሚገኘውን የተማሪዎች ካፌ ተጠቅመህ/ሽ ውቃለህ/ቂያለሽ?

1. አዎ 2. አይ አላውቅም(መልሱ አይ ከሆነ ጥያቄው አልቋል)

68 ዩኒቨርሲቲ ውስጥ የሚገኘውን የምግብ ካፌ ምን ያህል ጊዜ ትጠቀማለህ/ሚያለሽ?

1. ሁልግዜም 2. ብዙ ጊዜ 3. አንዳንድ ጊዜ 4. አልጠቀምም

<u>X. በመረጃ ሰብሳቢው ብቻ የሚሞላ</u>

69 ስጥናቱ ደም ስመስጠት ፍቃደኛ ነህ/ሽ?

1. አዎ 2. አይደለሁም

70 የምርመራ ውጤት

1. ----------

2. ፍቃደኛ ያልሆነ

ይህ የመጠይቁ መጨረሻ ነው::

ለትብብርህ/ሽ ና ገዛህ/ሽ በጣም አመሰግናለሁ!

Declaration Page

Declaration

I, the undersigned declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of Public Health. I also declare that it has never been presented in this or any other university and that all resources and materials used in the thesis have been duly acknowledged.

Student Name:_____

Signature:_____

Place of submission: _____

Date of submission:-_____

This thesis has been submitted for examination with my approval as a university advisor.

Advisor Name:_____

Signature: _____

Date of submission: _____